Effects on the particle verb alternation across English dialects

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A Comparative Study of Language Change in Northern Englishes (2008-13)

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1. Introduction

Overview

The particle verb alternation in English.

(1) a. She turned off the fan. (continuous order)
b. She turned the fan off. (discontinuous order)

1. Introduction

Overview

- Effects on the particle verb alternation:

i. Linguistic effects
   - phonological (weight)
   - information-structural (focus)

ii. Dialect effects

- Data: two judgment experiments and a Twitter corpus study

1. Introduction

Weight and focus effects

- Heavy objects disfavor discontinuous order

  (Chen 1986, Kroch & Small 1989, Gries 2001, Lohse et al. 2004)

  – processing: minimize dependency domains

  – end-weight: heavy elements prefer the end of the clause

(2) a. She turned off the fan that I brought in.

b. ?She turned the fan that I brought in off.

(3) a. *She turned off it.

b. She turned it off.

1. Introduction

Weight and focus effects

- Given objects (topics) favor discontinuous order

  (Bolinger 1971, Svenonius 1996, Dehé 2001).

  – old/topic elements occur before new/focused elements

(4) Q: Who will you pick up?
A: I'll pick (?the girls) up (the girls). (Svenonius 1996)

(5) Q: How are Turid and Ingrid going to get here?
A: I'll pick (the girls) up (?the girls). (Svenonius 1996)

1. Introduction

Cross-dialectal differences

- Social/stylistic effects

  (Kroch & Small 1989, Gries 2001)

- UK dialectal differencea
  - Scotland favors continuous order
  - S. England favors discontinuous order

    (Hughes et al. 2005)

- Founder effects in North America?

  (Kurath 1949, Montgomery 2006)

1. Introduction

Goal of this paper

- We report on three studies designed to test these claims.
  - ***Experiment 1***: judgment experiment, UK & US subjects (N=297), testing weight, focus, and dialect effects
  - ***Twitter study***: corpus study, UK & US data, testing dialect effect
  - ***Experiment 2***: judgment experiment, US subjects (N=48), testing focus effect

2. Experiment 1

Data and method: *Subjects*

- 297 self-described native speakers of English
  - -145 from US/Canada
  - -152 from UK/Ireland

- Volunteers, recruited online through contacts of authors.

- Almost all with ≥ BA-level education.

2. Experiment 1

Data and method: *Materials*

- 2 x 2 x 2 design (8 conditions)

  - ***Order:*** continuous vs. discontinuous

    (V-Prt-O) (V-O-Prt)

    (6) She turned (the fan) off (the fan).

  - ***Object weight:*** 3-syllable vs. 7-syllable

    (D-N) (D-A-A-N)

    (7) Andrea cut open the (heavy juicy) melon.

2. Experiment 1

Data and method: *Materials*

- 2 x 2 x 2 design (8 conditions)
  - ***Focus:*** Biased via a cataphoric pronoun in the preceding clause referring to subject or object.

(8) Her kids wanted a snack, so Andrea cut open the (heavy juicy) melon. new object (?)

(9) It was about to spoil, so Andrea cut open the (heavy juicy) melon. given object (?)

2. Experiment 1

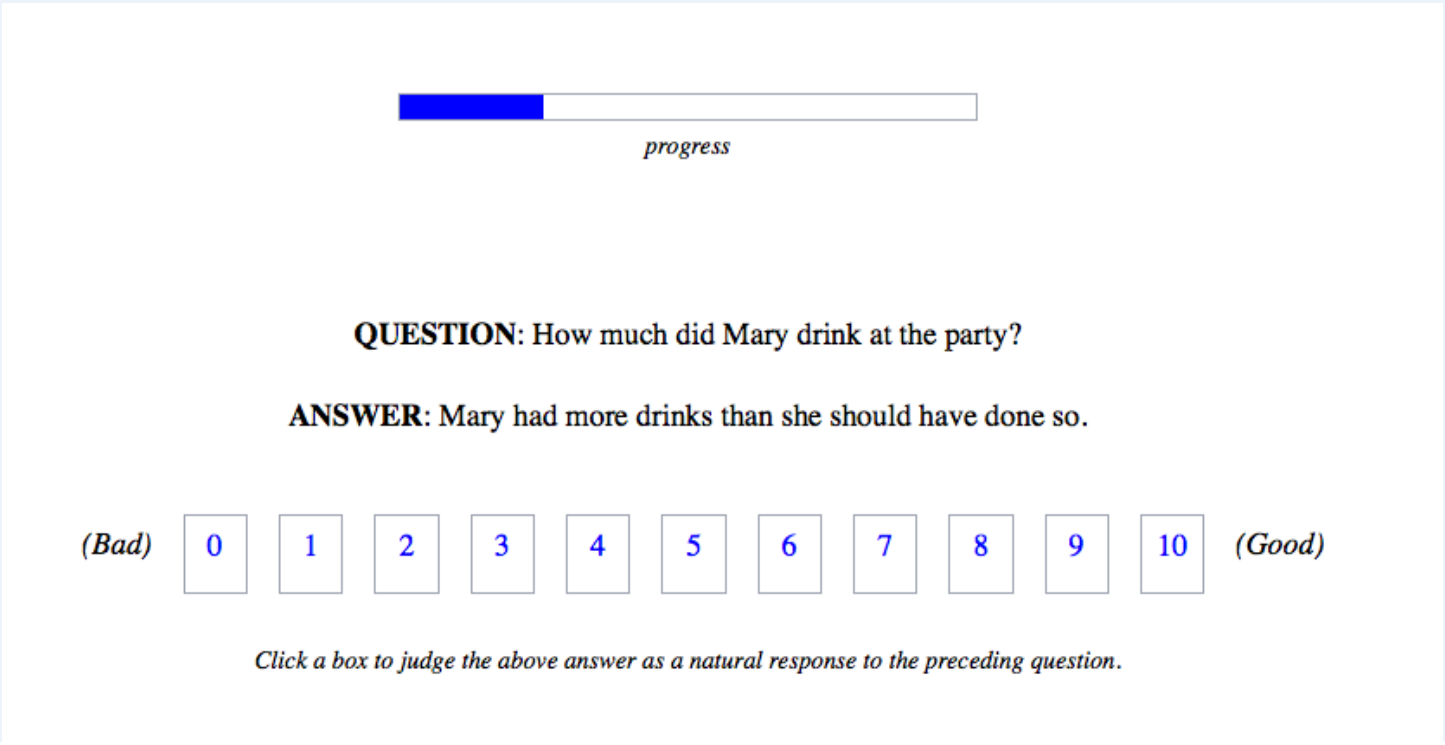
Data and method: *Materials*

- Compositional & non-aspectual class verbs (Lohse et al.2004).
- 4 items per condition, 4 x 8 = 32 judgments per subject.
- 32 lexicalizations assigned to blocks by Latin square.
- Subjects pseudo-randomly assigned to lists,
  each with 4 blocks.
- Lists pseudo-randomized within blocks with 32 fillers.
- 16 good, 16 bad fillers, all the same for each subject.
- Each subject's fillers used to normalize their responses.

2. Experiment 1

Data and method: *Procedure*

- 11-point scale judgment task.
- Online application using Ibex Farm. (Drummond 2011)



2. Experiment 1

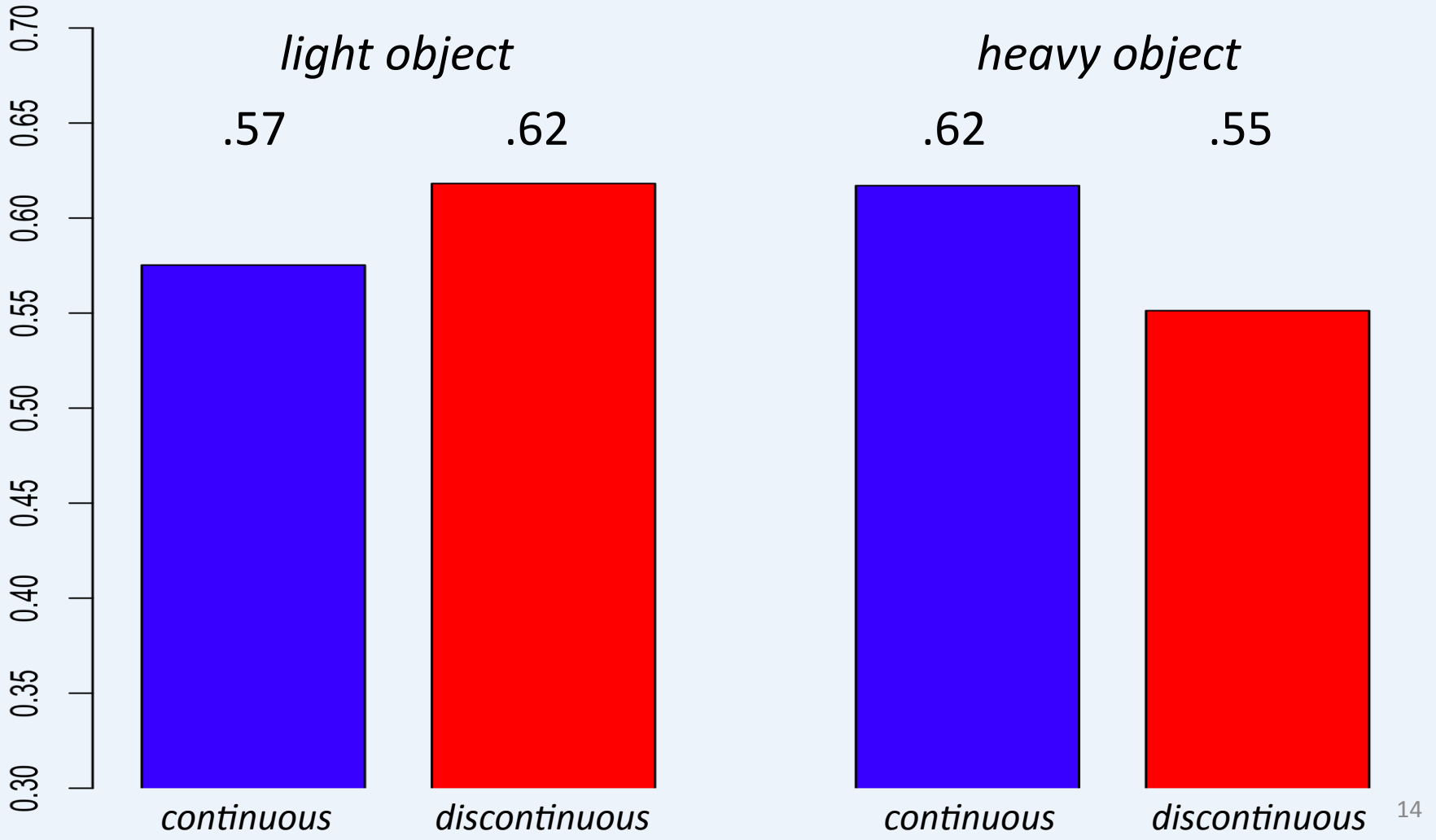
Results

- Predicted effect of weight * order (p = .00003).
- No effect of focus * order (p = .12).
- No regional effects within the British Isles
  (12 regions, p = .98)
- nor within the US (6 regions, p = .65).
- New effect of country * order
  (UK vs. Canada vs. US, p = .001).

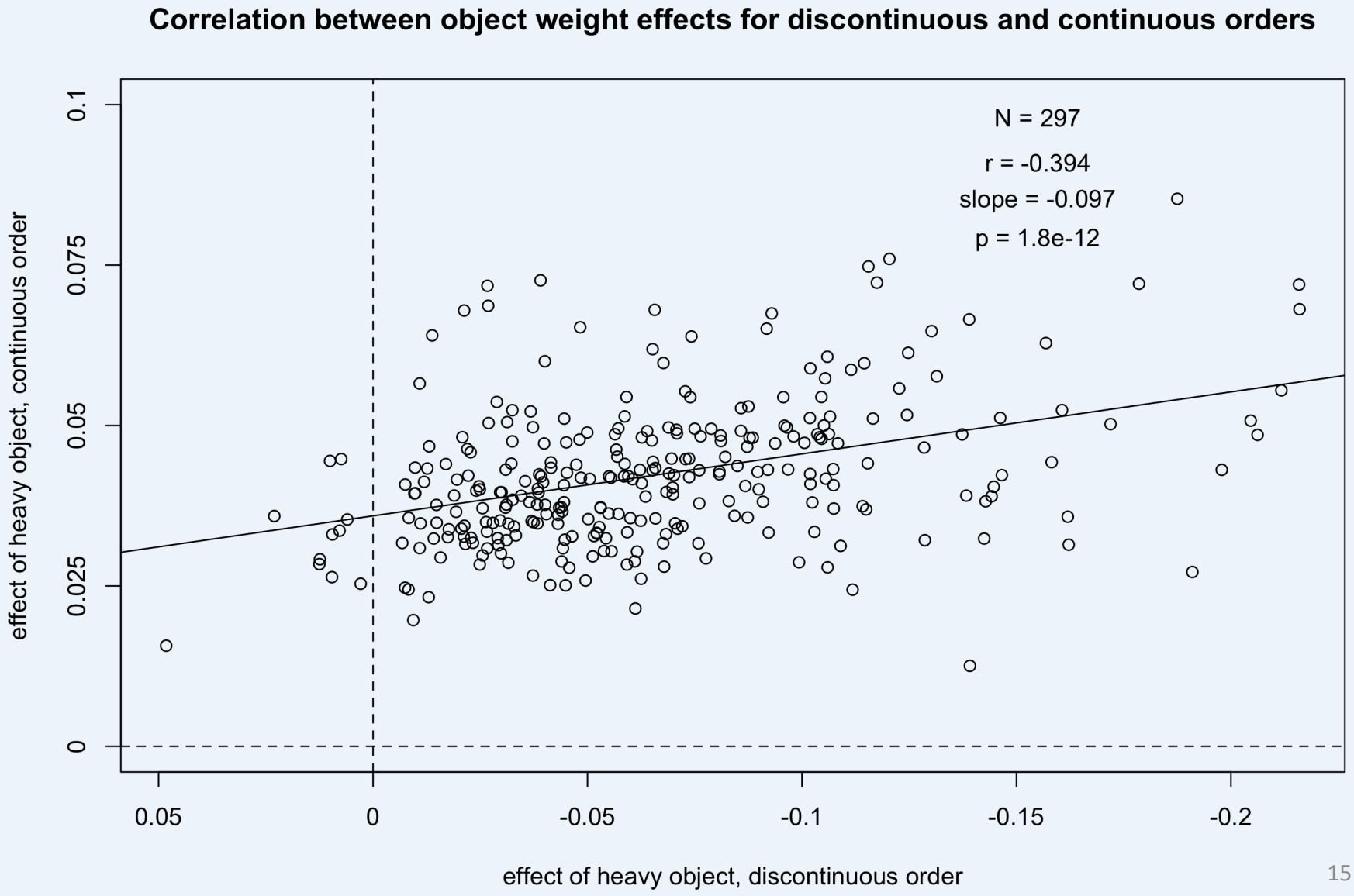
2. Experiment 1

Results – weight * order (p = .00003)

response ~ weight * order + (weight * order | subject) + (weight * order | item)



2. Experiment 1: UK & US regional effects



2. Experiment 1

Discussion – weight effect and "yoking"

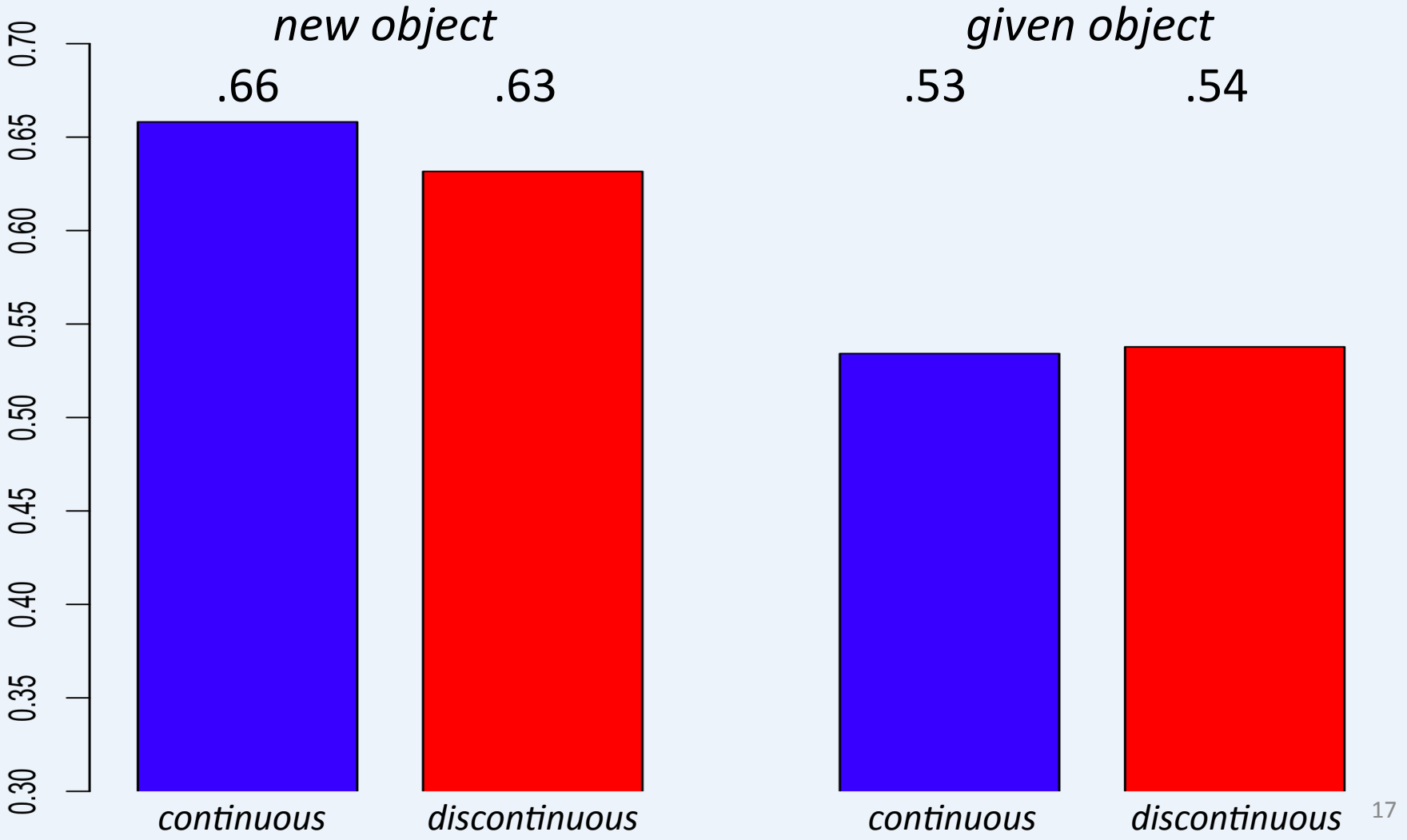
- Processing explains why heavy objects make the discontinuous order worse. But why should heavy objects improve the continuous order?
- ***Three hypotheses***:
  i. Surprisal: light object is unpredictable in continuous order.
  ii. Acceptability is sensitive to processing constraints on the other alternant.
  iii. Acceptability is sensitive to relative probabilities of alternants in production.

(Bresnan 2007, Bader & Häussler 2010, Melnick et al. 2011)

2. Experiment 1

Results – focus * order (p = .12)

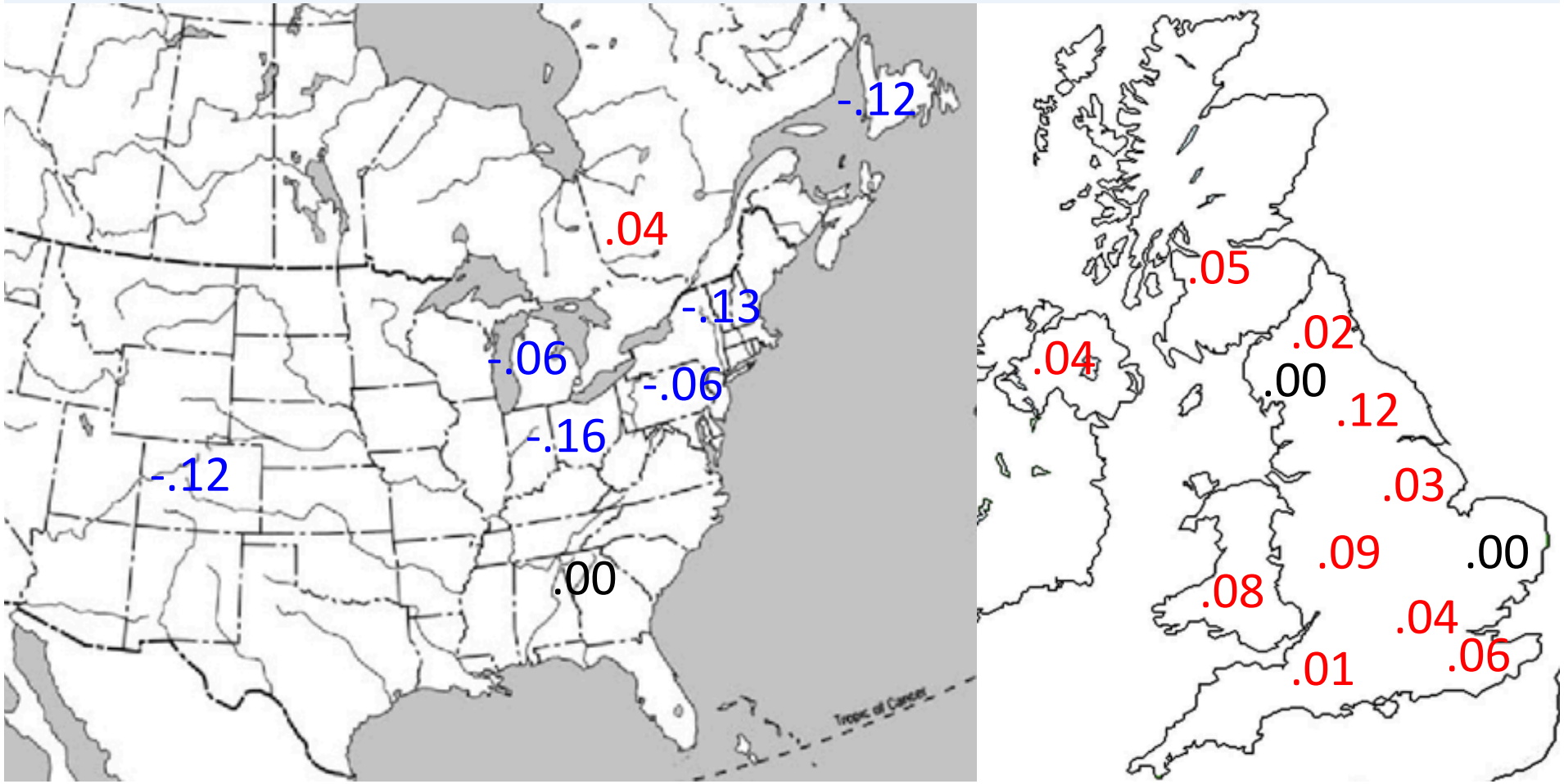
response ~ focus * order + (focus * order | subject) + (focus * order | item)



2. Experiment 1

Results – region * order (not significant)

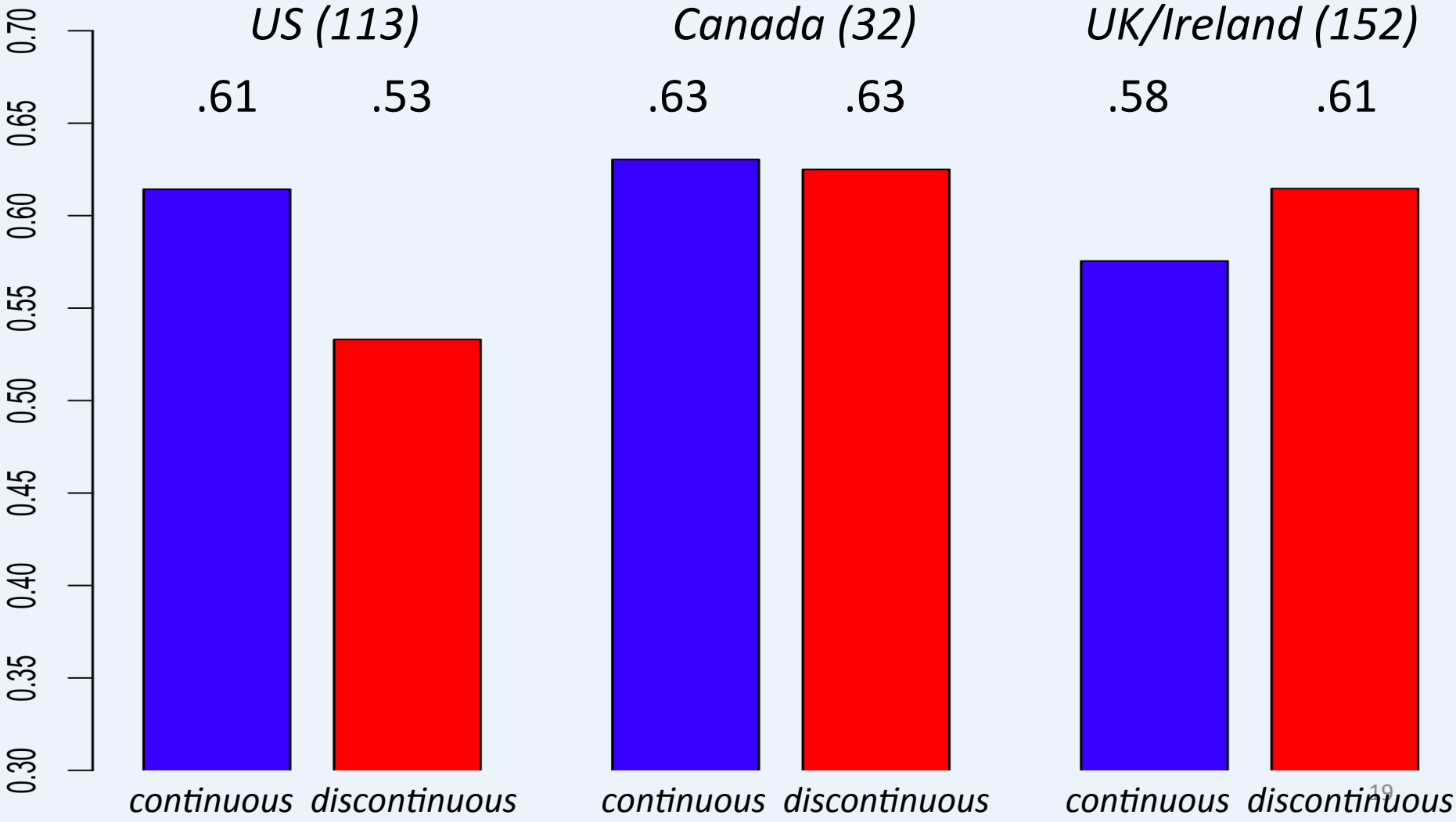
response ~ region * order + (order | subject) + (order | item)



2. Experiment 1

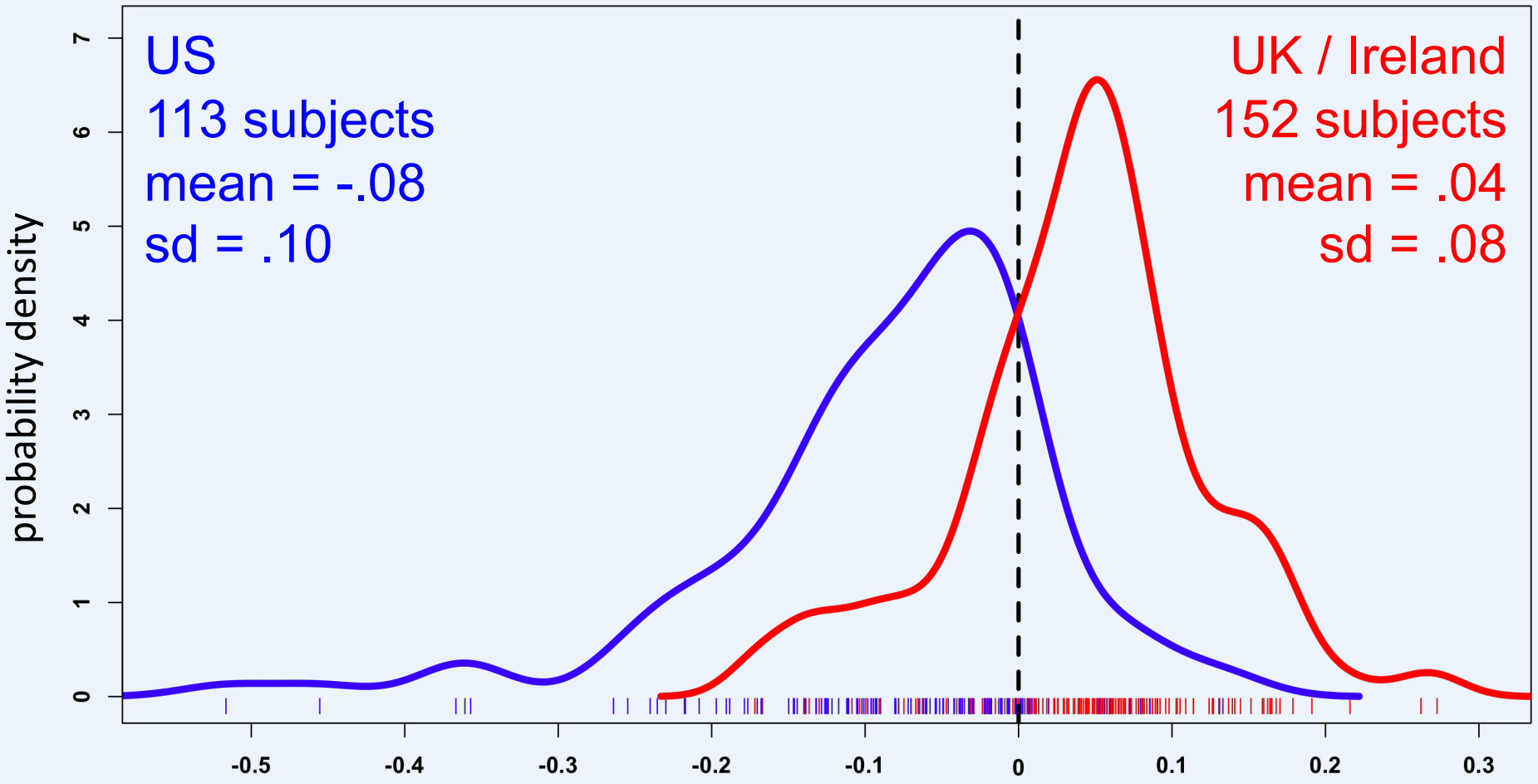
Results – country * order (p = .001)

response ~ country * order + (order | subject) + (country * order | item)



2. Experiment 1

Results – country * order (by subject)



subject random slope: preference for discontinuous over continuous

3. Twitter study

Data and method

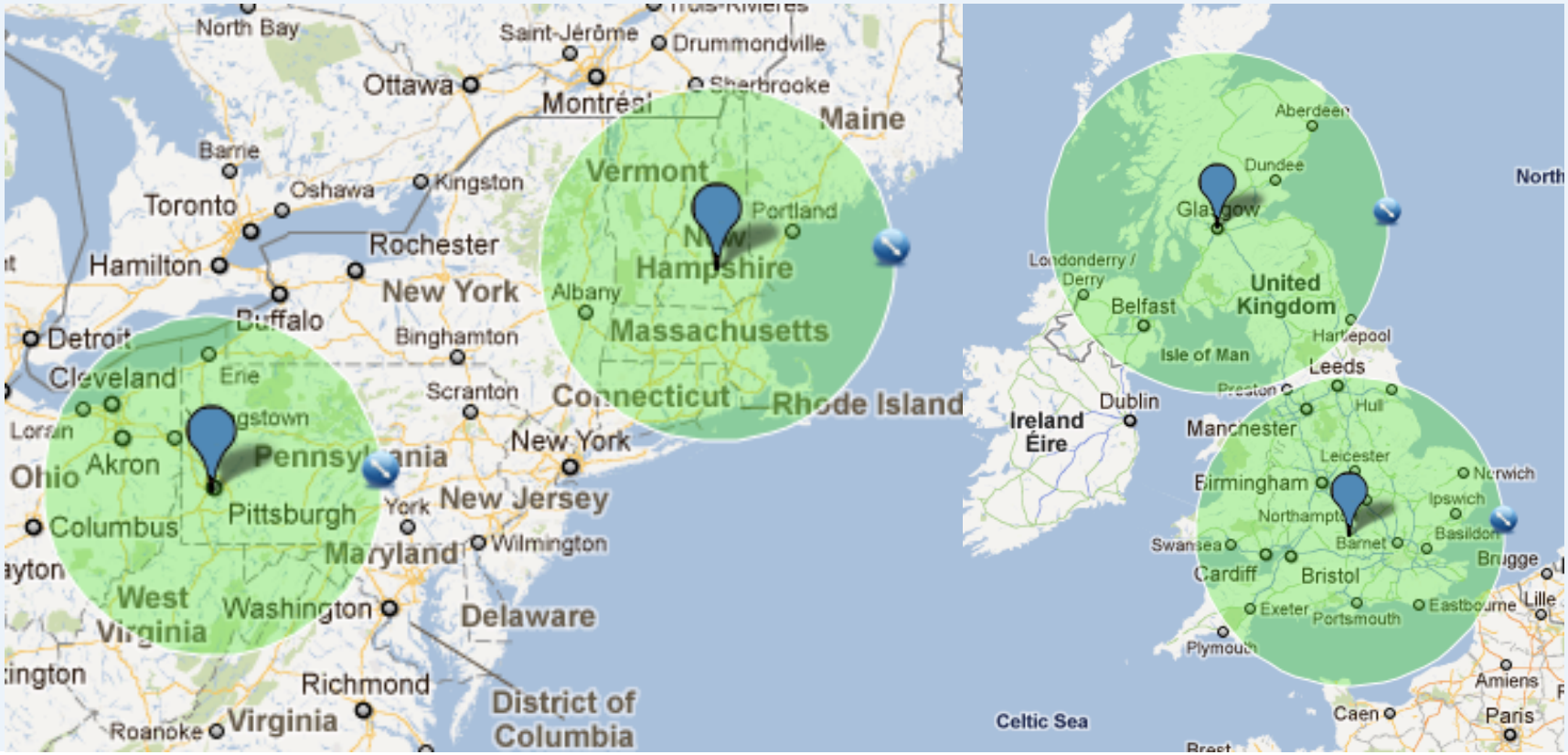
- Common phrase selected: *turn (on) the light (on)*
- For more data, *turn (off) the light (off)*, & *lights.*
- Between February and May 2011, gathered examples from Twitter API every few days
- Geocoded to areas of 150 mile radius, centered on Pittsburgh, Concord (NH), Oxford, Glasgow
- UK sites expected to differ (Hughes et al. 2005)
- US sites have N. vs. S. UK settlement histories
- Cleaned data of song lyrics, quotes, memes

http://search.twitter.com/search.atom?rpp=100&page=1&geocode=51.75,-1.25,150mi&q=%22turn%20on%20the%20light%22

3. Twitter study

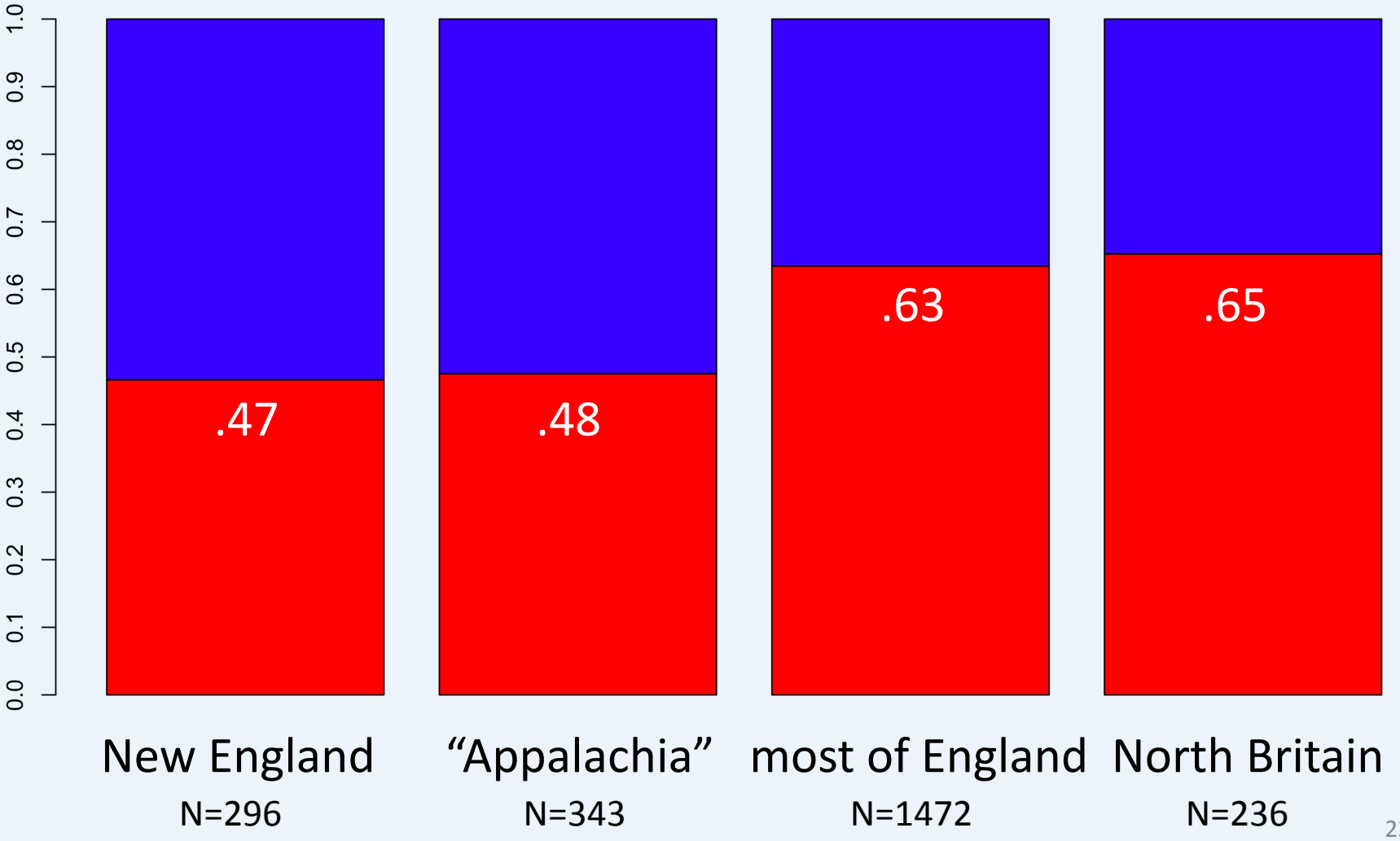
Data and method

US: W. Penna., E. Ohio, N. W. Va. vs. most of New England
UK: Scotland, N. Ireland, N. England vs. most of England



3. Twitter study

Results

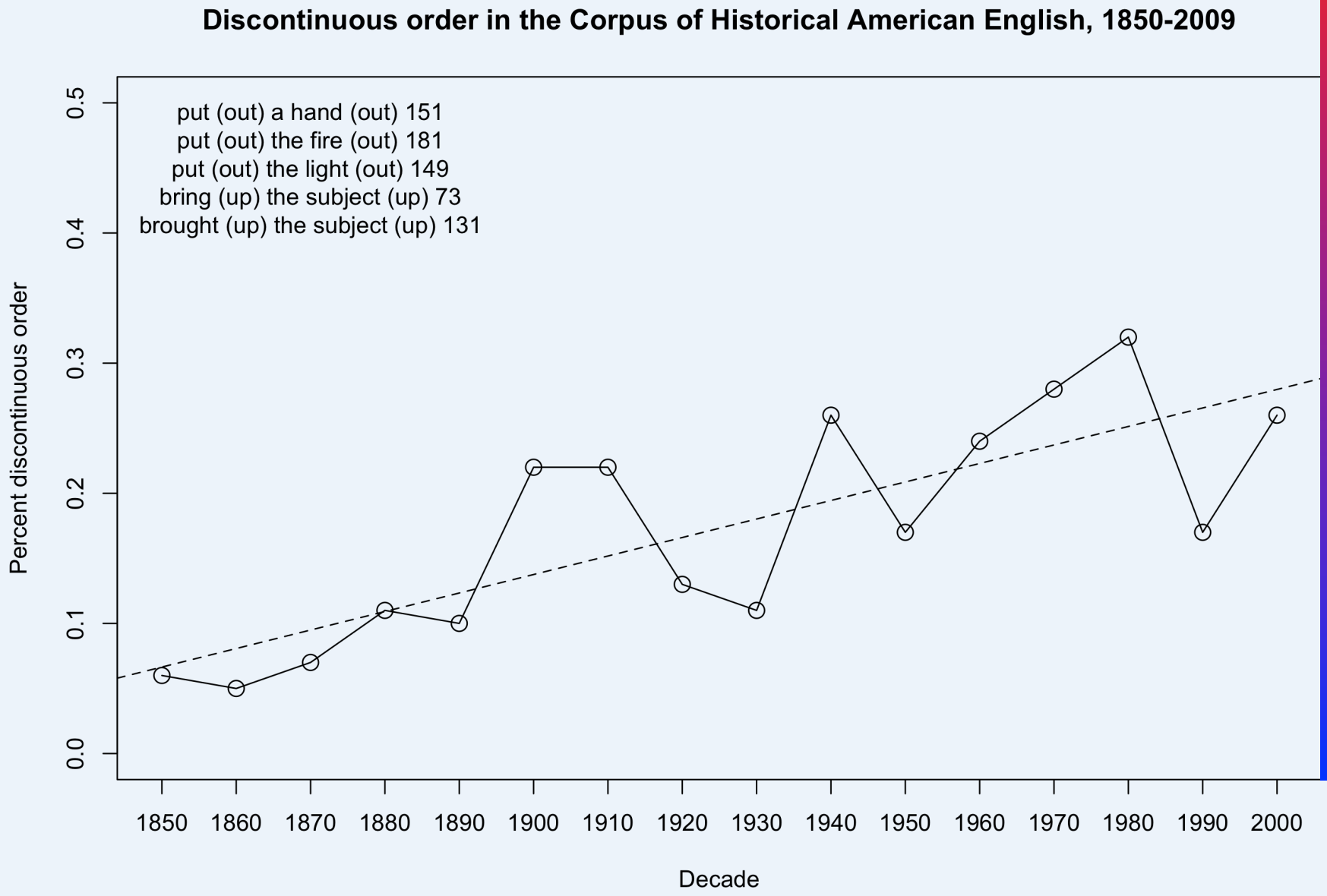


3. Twitter study

Summary

- Again, no regional differences within UK and US.
  (contra Hughes et al. 2005)
- Again, strong trans-Atlantic difference.
- Historical corpora up to 1710, mostly continuous.
- Possibly an innovation toward discontinuous order that is more advanced in UK. (Elenbaas 2008)

4. Pilot historical study



5. Experiment 2

- Given objects (topics) favor discontinuous order

  (Bolinger 1971, Svenonius 1996, Dehé 2001).

  – old/topic elements occur before new/focused elements

(5) Q: How are Turid and Ingrid going to get here?
A: I'll pick (the girls) up (?the girls). (Svenonius 1996)

(9) It was about to spoil, so Andrea cut (the melon) open (the melon) .

- Attempt to bias focus with a cataphoric pronoun failed to produce the predicted effect.

5. Experiment 2

- Svenonius' (1996) intonational account:
  - new information foci are intonationally prominent and prefer to be sentence-final.
- Dehé's (2001) syntactic account:
  - continuous = "neutral" order.
  - objects in discontinuous order when outside the focus domain, i.e. are defocused.

(5) Q: What did Durban do to the camera?
A: Durban [$_{VP[+Foc]}$turned [$_{XP[-Foc]}$the camera] OFF].
(Dehé 2001: 132)

5. Experiment 2

Data and method: *Materials*

- We bias focus with a preceding *wh*-question.

(10) Q: Who did Tanya call up?
A: Tanya called (up) the plumber (up).

- A 2 x 2 design crossing:
  - order (2 levels)
  - focused constituent (4-levels)
  - 2 x 4 = 8 conditions

5. Experiment 2

Data and method: *Materials*

(11) Q:What happened to the files? (O given, SV focus)
A: John backed (up) the files (up).

(12) Q: What did John back up? (SV given, O focus)
A: John backed (up) the files (up).

(13) Q: What did John do? (S given, VP focus)
A: John backed (up) the files (up).

(14) Q: What happened? (nothing given, sentence focus)
A: John backed (up) the files (up).

5. Experiment 2

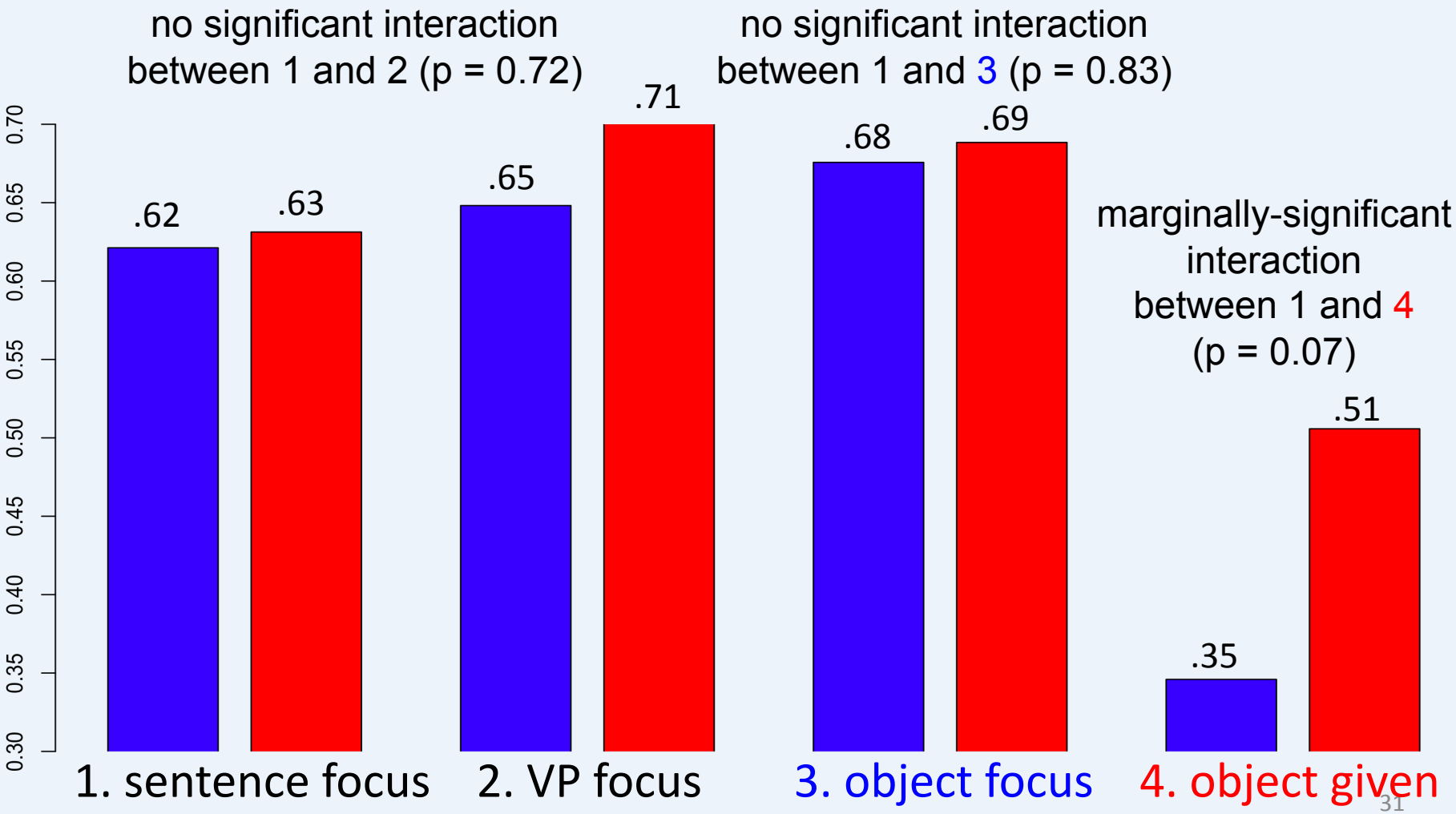
Data and method: *Subjects & procedure*

- ***Subjects*:**
  - 48 student volunteers, self-described natives
  - 7 male, 41 female, 18-50 years old
- ***Procedure*:**
  - 11-point scale, self-paced
  - Web-based (Ibex Farm)
  - 4 items/condition/subject = 32 test sentences

5. Experiment 2

Results – condition * order

response ~ condition * order + (condition * order | subject) + (condition * order | item)



5. Experiment 2

Discussion

- No evidence that continuous orders are preferred in neutral (out-of-the-blue) contexts.
- Some evidence for a defocusing effect.
  - given objects prefer a more leftward position
  - predicted by information-structure literature
- No evidence for a focusing effect.
  - focused objects do not prefer final position
  - absence of this effect is not predicted by intonational approach (Svenonius 1996).

6. Summary

Three main claims:

i. Significant weight/order interaction.

- some results follow from processing theory, others have several possible explanations.

ii. Marginally-significant focus/order interaction, once better method of biasing focus was found

iii. No regional differences within UK (or US), but a new trans-Atlantic difference was found

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